

1. Method for scaling the radio interface for GPRS traffic and mixed GPRS + voice GSM traffic, using a test platform comprising at least one cell model of a mobile radiotelephone network and a traffic simulation system

5 memorizing at least one quality of service indicator, at least one cell configuration and traffic volumes for voice GSM and GPRS data transfers, this method being characterized in that:

- measurements representative of GPRS quality of service are performed on test platform, these measurements being made for different volumes of GPRS traffic in said cell model and in relation to the number of time slots available for GPRS traffic,
- 10 said traffic simulation system stores in memory data representative of measurements made on test platform, this data forming quality parameters,
- 15 for at least one cell configuration and for determined volumes of GSM traffic and GPRS data transfers, a plurality of sessions is generated by said traffic simulation system, forming arrivals of GSM calls and GPRS data transfers, and said simulation system, taking said quality parameters into account, calculates a level of GPRS performance achieved for said cell configuration.
- 20 by dichotomy, said configuration of cell model is modified by addition/removal of at least one new time slot available for GPRS traffic or of a transceiver, in order to determine the minimum configuration enabling said level of performance to attain a determined threshold.

2. Method according to claim 1, wherein the traffic simulation system, for a determined cell configuration, estimates:

- the number of time slots occupied by GSM circuit calls,
- 30 the number of simultaneous GPRS data transfers,

- the number of unoccupied time slots available for GPRS data transfers.

3. Method according to claim 1, wherein said measurements made

5 on test platform are measurements of time units or GPRS transfer rates for one same application, the loading of this application being initiated at the same time on at least one computer of said platform.

4. Method according to claim 1, wherein said measurements are

10 performed by test platform under the following conditions:

- in a strong field and in static state
- with declaration of time slots available for GPRS
- in the absence of any voice GSM traffic.

15 5. Method according to claim 3, wherein the loading time of said application is measured on each computer, the loading times being collected and processed by test platform to obtain a matrix of transfer results in relation to GPRS time slots and to the number of simultaneous data transfers, called a first matrix.

20

6. Method according to claim 5, wherein the data of said first matrix is compared with said quality of service indicator to form a matrix, called second matrix, distinguishing between favourable cases in which quality of service is attained, and non-favourable cases in which it is not.

25

7. Method according to claim 1, wherein the traffic simulation system, to calculate said level of GPRS performance corresponding to a cell configuration, generates a matrix of time slot occupation, called a third

matrix, in relation to the number of simultaneous GPRS data transfers, each division in the third matrix representing a time percentage.

8. Method according to claim 7, wherein said level of performance is
5 a performance rate obtained by totalising the divisions in the third matrix corresponding to favourable cases when quality of service is achieved, or else a rate of non-performance obtained by totalising the complementary divisions for which quality of service is not reached.

10 9. Method according to claim 1, wherein said quality of service indicator is a targeted mean rate per session, for a determined type of application, or a percentile rate defined by the criterion of a minimum rate within a determined percentage.

15 10. Method according to claim 9, wherein the targeted mean session rate at peak GPRS traffic times is a percentage of the targeted rate outside said peak times.

11. Simulation system for use of the method according to claims 1,
20 intended to scale the radio interface for GPRS traffic and mixed GPRS + voice GSM traffic, having memory means to store memorized data representative of measurement results of GPRS transfer quality made on a test platform or similar for a variable number of time slots available for GPRS, memory means to store at least one quality of service indicator,
25 memory means to store at least two cell configurations and memory means to store GSM traffic and GPRS transfer volumes, characterized in that the simulation system uses this data, via session generation means and cell configuration selection means, to simulate arrivals of GSM calls and GPRS

data transfers, to calculate with calculation means a level of GPRS performance obtained for a selected cell configuration.

12. Simulation system according to claim 11, wherein said
5 calculation means comprise means for determining time percentages corresponding, for the selected cell configuration, to states defined by the number of time slots available for GPRS data transfers and the number of simultaneous GPRS data transfers.

10 13. Simulation system according to claim 12, wherein analysis means take into account said memorized data representative of GPRS transfer quality measurements made on test platform to identify and select the time percentages of said states which do not meet said quality of service indicator.